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RECEIVED
July 13, 2022
SPCS

TELEPHONE (907) 787-8700

July 13, 2022

Letter No. 49999

Anthony Strupulis P.E., State Pipeline Coordinator
State Pipeline Coordinator's Section
Alaska Department of Natural Resources
550 West 7th Avenue, Suite 1100
Anchorage, AK 99501

RE: Trans-Alaska Pipeline System, Pipeline Milepost 20
Land Description Modification for Right-of-Way Lease, ADL 63574
Bank Erosion Mitigation at Sagavanirktok River

Dear Mr. Strupulis:

This follows Alyeska letter no. 49780 transmitting a land use permit application for the the subject work. On further consideration of the design features, including in the meeting with Alex Lai at your office yesterday, Alyeska Pipeline Service Company, agent for the Trans Alaska Pipeline System Right-of-Way Lessees, hereby applies to modify the description of the TAPS facilities attached to the referenced lease to include certain state lands needed to accommodate construction of the subject structure.

The lands required for construction are described on Attachment A, and a narrative and drawings are enclosed describing the work in further detail. Plate 3 of the drawings is revised to show the rock vanes and a new Plate 5 of the vane sections is added. No change is made to the narrative. The lands needed to accommodate the new structure after construction will be precisely described upon completion of the as-built survey.

Thank you for your consideration of this application, and please contact me at 787-8170, if more information is needed.

Sincerely

Nagel,
Peter C.
Peter C. Nagel, SR/WA
Land and Right-of-Way

Digitally signed
by Nagel, Peter C.
Date: 2022.07.13
09:45:18 -08'00'

Enclosures

cc: SPCS Records

ATTACHMENT A

Township 7 North, Range 14 East (Umiat Meridian)

Section 5 SE4, those lands adjacent to the Trans Alaska Pipeline right-of-way as shown on the attached drawings, containing approximately 99 acres.

**Bank Erosion Mitigation, Sagavanirktok River
Trans Alaska Pipeline System, Milepost 20
Permit Narrative (APSC, June 2022)**

Purpose

The purpose of this work is to augment the buffer zone along an inactive gravel pit adjacent to the Sagavanirktok River to protect the integrity of the shallow buried mainline pipe.

The old gravel pit pond is located between the pipeline and river; it is over five feet deep, its width ranges from 90-230 feet, and it extends about 1300 feet along the pipeline with its westerly edge set off approximately 200 feet. Along its easterly edge, progressive erosion by the Sagavanirktok has reduced the width of the remaining vegetated buffer, and the river is expected to hydraulically connect to the pond within the next few Breakup seasons. When that happens, the buffer distance between pipeline and river will immediately be reduced by half and the stream reach destabilized. An unstable reach will lead to additional bank erosion in the area that would threaten the integrity of the pipeline.

Site Description

The project site is located 20 miles south of Pump Station 1 and 37 miles north of Pump Station 2 on the Trans-Alaska Pipeline System (TAPS). The pit pond serves routinely as a water source for highway projects, maintenance and oil and gas exploration activities.

At MP 20 the Sag River crosses the Arctic Coastal Plain, which primarily supports lowland tundra vegetation types. Wetland plant communities are the predominant vegetation type in the lowland tundra zone which includes mosses, lichens, herbs and low shrubs. The soils in this area consist of organic silt with some sand, gravel mixed with sand, numerous cobbles and scattered boulders. The adjacent gravel bar is almost exclusively bare mineral soils such as gravels and sands with sparse if any vegetation.

The Sag River and its side channels are classified as anadromous fish streams. Arctic char, cisco and whitefish inhabit the Sag River. There is also a known caribou winter concentration area and a polar bear denning habitat between PLMP 13 – 26.

Project Description

The eroding buffer strip between the gravel pit pond and the river will be augmented along the entire length of the pit. In-situ alluvial material will be scraped from the surface of the adjacent gravel bar to raise the elevation of its westerly edge and widen the buffer strip. At certain locations along the buffer that are most vulnerable to erosion, riprap will be placed discretely to enhance the buffer stability. The expanded buffer area will be left to naturally revegetate with native flora. To access the work area, a temporary gravel ramp will be built from the bank at the north of the pit pond where a gravel pad extends to the riverbank. After construction the ramp will be removed.

Equipment used on the project will be primarily trucks, backhoes, loaders, dozers and compactors.

Work in and Around Water

This work will be implemented in late fall when the river stage is typically very low and local seasonal side channels are frozen or dry. Therefore, it is anticipated that the work area will be mostly frozen and/or dry. Depending on field conditions, there is a small possibility that equipment tracks may be in contact with isolated areas of groundwater seepage especially in the early stages of construction before full freeze-up. And, in the unlikely event that an open channel across the work area is encountered, a stream diversion or a temporary installation of culverts will be performed.

Environmental Considerations and Mitigation

Construction of a new spur dike field or revetment was considered as an alternative and discarded because the proposed work provides a sustainable, temporary protection while a longer-term solution is devised with the gravel pit developer. Water quality will be impacted only nominally because the work will not be conducted in flowing water and will not extend into the water table. Access across the gravel bar and expanded buffer zone will be routed as much as practical to avoid any minor braids, and best management practices such as stream diversion or temporary culvert installation will be employed where avoidance is not practical.

The project will avoid adverse impacts to water flow, floodplain and existing, riparian vegetation. Heavy equipment use will be confined to the existing TAPS access road, pad and the gravel bar. All fueling will be done in permitted areas outside the active floodplain and at least 100 feet from the Ordinary High Water line.

There will be minimal impact to aquatic life because the work will not be in active channels. Any fish encountered in pools subject to the work will be captured and released in the waterways nearby. Alyeska's operations in this area are covered by the company's Polar Bear Interaction Plan and a Letter of Authorization for Unintentional Take from the US Fish and Wildlife Service.

The cut and fill work and its support areas will not occur in wetlands. No net loss of habitat is anticipated because the buffer is being augmented by use of alluvial material immediately adjacent to it. No additional mitigation is planned.

Schedule

The project will be implemented between late September and early November of 2022 and will take approximately 24 days to complete.

Approximate Construction Sequence of Work

1. Mobilize personnel and equipment
2. Build access ramp
3. Scrape and relocate alluvial aggregates from larger gravel bar area to the buffer/bank area.
4. Augment the buffer strip
5. Cleanup work site and demobilize

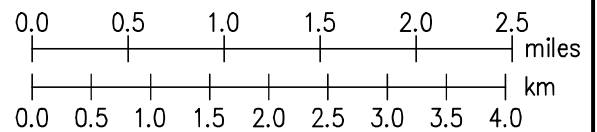
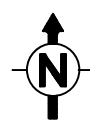
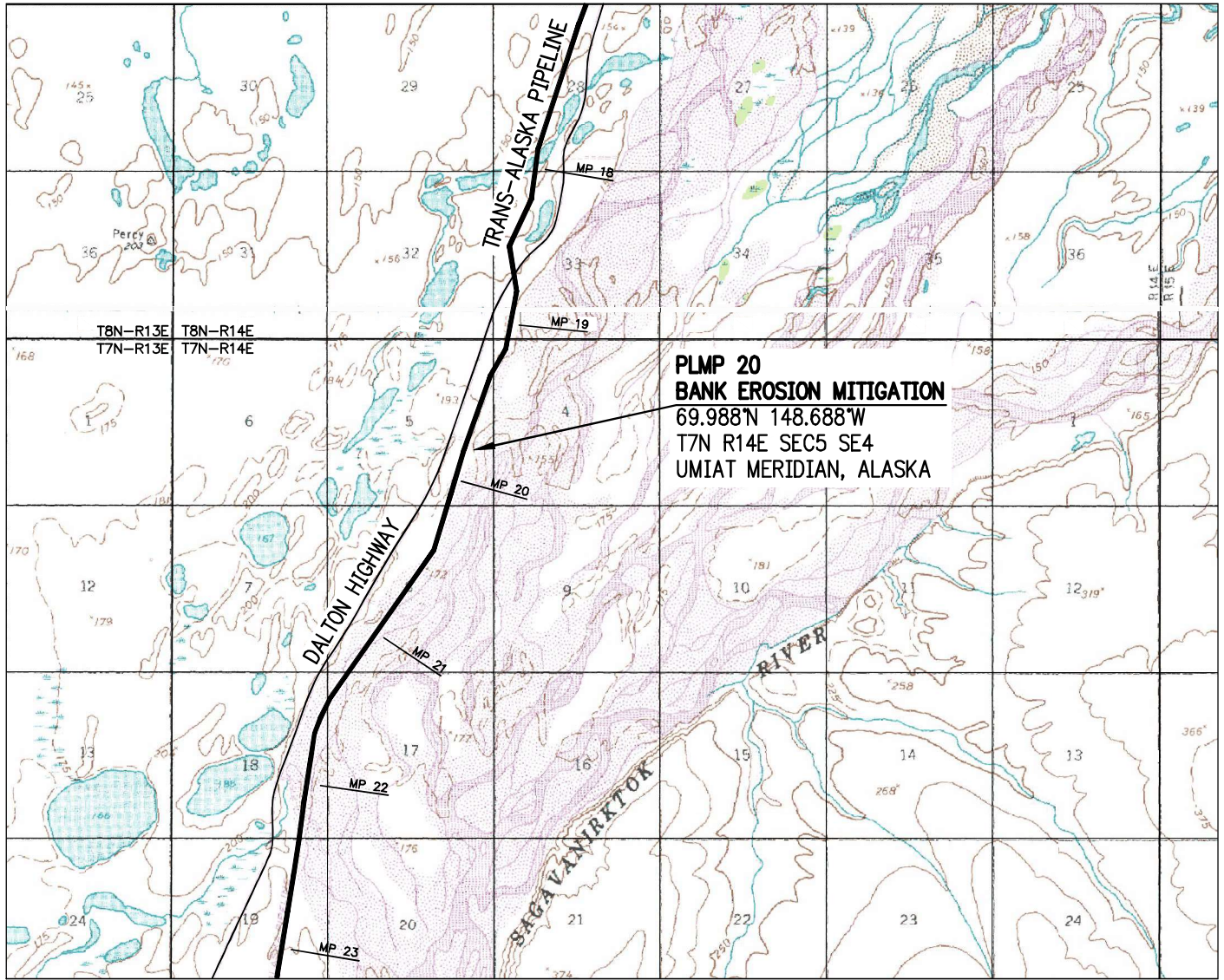
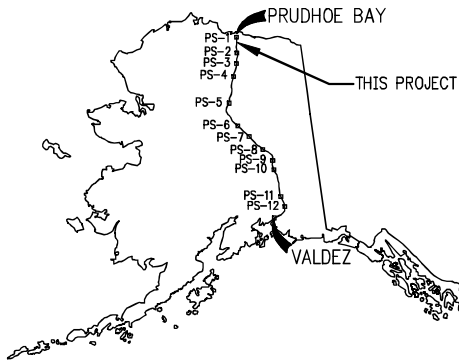
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ADJACENT PROPERTY OWNER: STATE OF ALASKA

ALYESKA PIPELINE SERVICE CO.

2022 RIVERS AND FLOODPLAINS IMPROVEMENTS
LOWER SAG RIVER – MP 20 BANK EROSION MITIGATION
LOCATION AND VICINITY MAP

TRANS ALASKA PIPELINE SYSTEM

DATE: 07/12/22

PLATE 1

REV. D DWN. MTH CKD. AJN APPR. JPD

SCALE: AS NOTED

SHEET 1 OF 5

FILE DATE:

PLOT SCALE:

FILENAME:

DALTON —
HIGHWAY

MP 19.5

PL STA 1028+50

MP 19.6

SITE ACCESS AND —
STAGING AREA
(1.8 ACRES APPROX)

MP 19.7

ADOT
GRAVEL PIT

MP 19.8

TAPS WORKPAD
(48" MAINLINE B/G)

MP 19.9

MP 20.0

PL STA 1059+50

MP 20.1

DOWNSTREAM END OF -
GRAVEL BAR: OPENED
TO RIVER PRIOR TO
DEMOBILIZATION (TYP)

- BANK EROSION AREA
(SEE PLATE 3)

PROPOSED
CONSTRUCTION
AREA LIMIT
(68 ACRES —
APPROX,
NOTE 1)

— EXISTING
GRAVEL BAR
(ACTIVE RIVER
FLOODPLAIN)

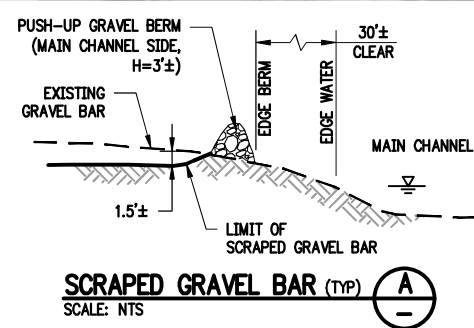
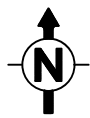


PHOTO DATE: 2013

PROPOSED RIGHT-OF-WAY ADDITION AREA



GRAPHIC SCALE

A horizontal number line with tick marks at 0, 400, and 800. The segment between 0 and 400 is filled with solid black. The segment between 400 and 800 is filled with a light gray color.

FEET

PLAN

SCALE: 1" = 400'

NOTE 1:
AREA OF EARTHWORK IS APPROXIMATELY
18 ACRES. SEE SECTION A FOR DETAILS
ON TEMPORARY PROTECTIVE GRAVEL BERM.

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2022 RIVERS AND FLOODPLAINS IMPROVEMENTS
LOWER SAG RIVER – MP 20 BANK EROSION MITIGATION
SITE PLAN

TRANS ALASKA PIPELINE SYSTEM

DATE: 04/18/22

PLATE 2

REV.	C	DWN. MTH	CKD. AJN	APPR. JPD
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SCALE: AS NOTED

SHEET 2 OF 4

AUTOCAD DWG. DO NOT REVISE MANUALLY.

FILE DATE:

PLOT SCALE:

FILENAME:

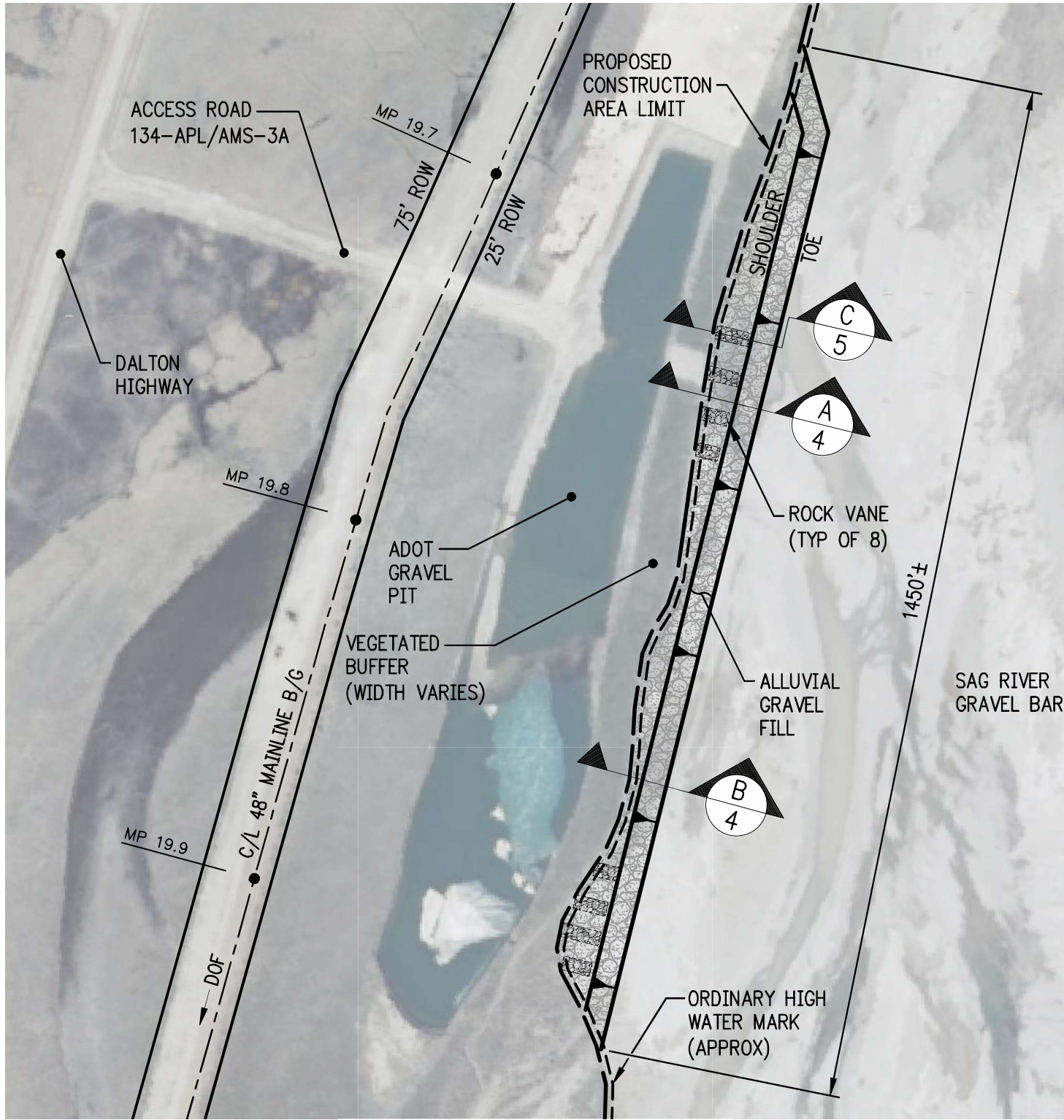
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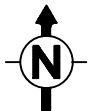


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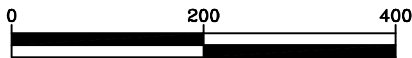
PLOT SCALE:

FILENAME:

PHOTO DATE: 2013



GRAPHIC SCALE



FEET

PLAN

SCALE: 1" = 200'

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2022 RIVERS AND FLOODPLAINS IMPROVEMENTS
LOWER SAG RIVER – MP 20 BANK EROSION MITIGATION
ENLARGED SITE PLAN

TRANS ALASKA PIPELINE SYSTEM

DATE: 07/12/22

PLATE 3

REV. D DWN. MTH CKD. AJN APPR. JPD

SCALE: AS NOTED

SHEET 3 OF 5

AUTOCAD DWG. DO NOT REVISE MANUALLY.

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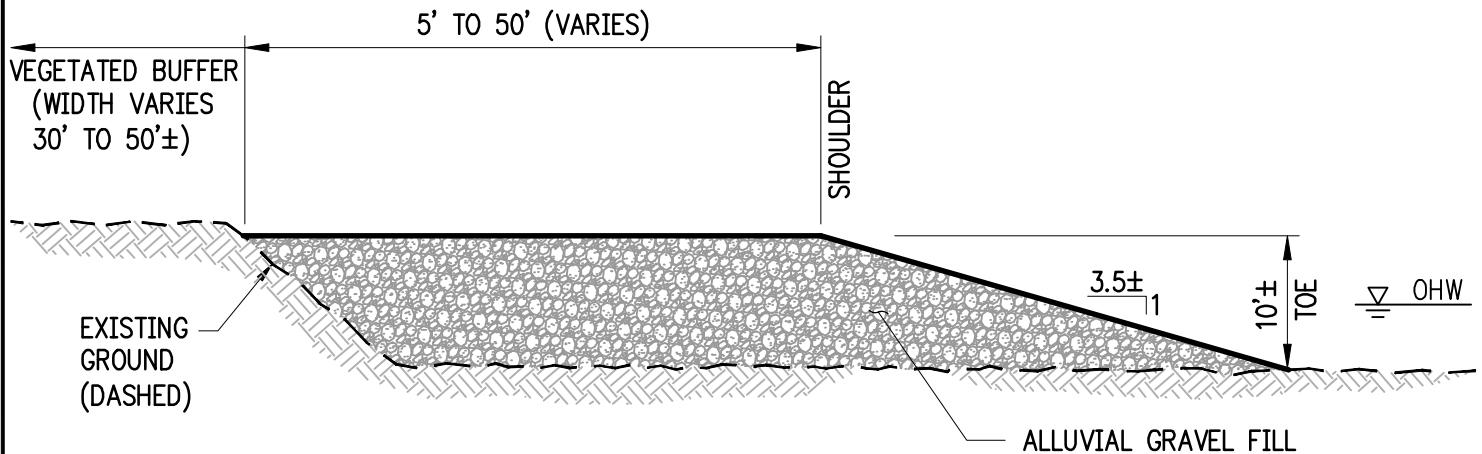
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ESTIMATED MATERIAL QUANTITIES

	BELOW OHW	ABOVE OHW	TOTAL
ALLUVIAL GRAVEL EXCAVATION (CY)	16,000	0	16,000
ALLUVIAL GRAVEL EXCAVATION (SF)	288,000	0	288,000
ALLUVIAL GRAVEL FILL (CY)	14,700	1,300	16,000
ALLUVIAL GRAVEL FILL (SF)	72,700	6,300	79,000
IMPORTED CLASS III-IV RIPRAP (CY) *	500	1,000	1,500

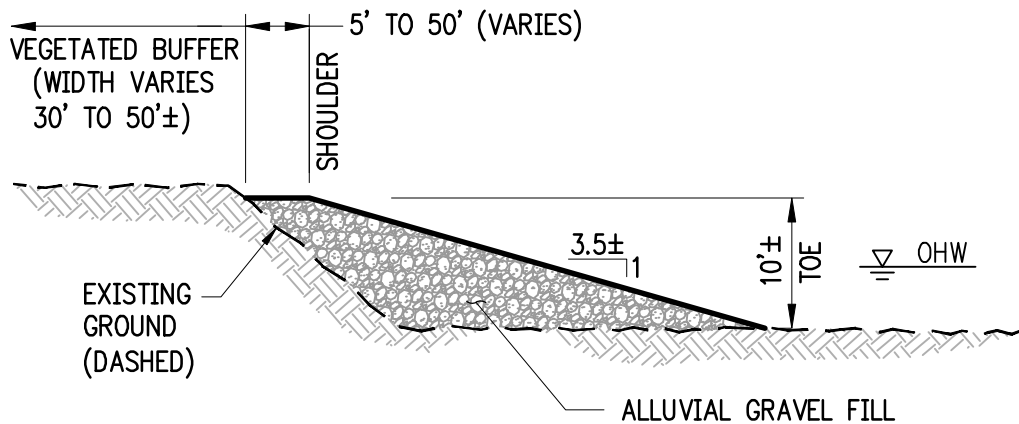
* RIPRAP PLACED DISCRETELY IN SAND AND GRAVEL FILL TO PROVIDE REINFORCEMENT AS ROCK VANES



TYPICAL SECTION

SCALE: 1" = 15'

A
3



TYPICAL SECTION

SCALE: 1" = 15'

B
3

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2022 RIVERS AND FLOODPLAINS IMPROVEMENTS
LOWER SAG RIVER – MP 20 BANK EROSION MITIGATION
SECTIONS

TRANS ALASKA PIPELINE SYSTEM

DATE: 07/12/22

PLATE 4

REV. D DWN. MTH CKD. AJN APPR. JPD

SCALE: AS NOTED

SHEET 4 OF 5

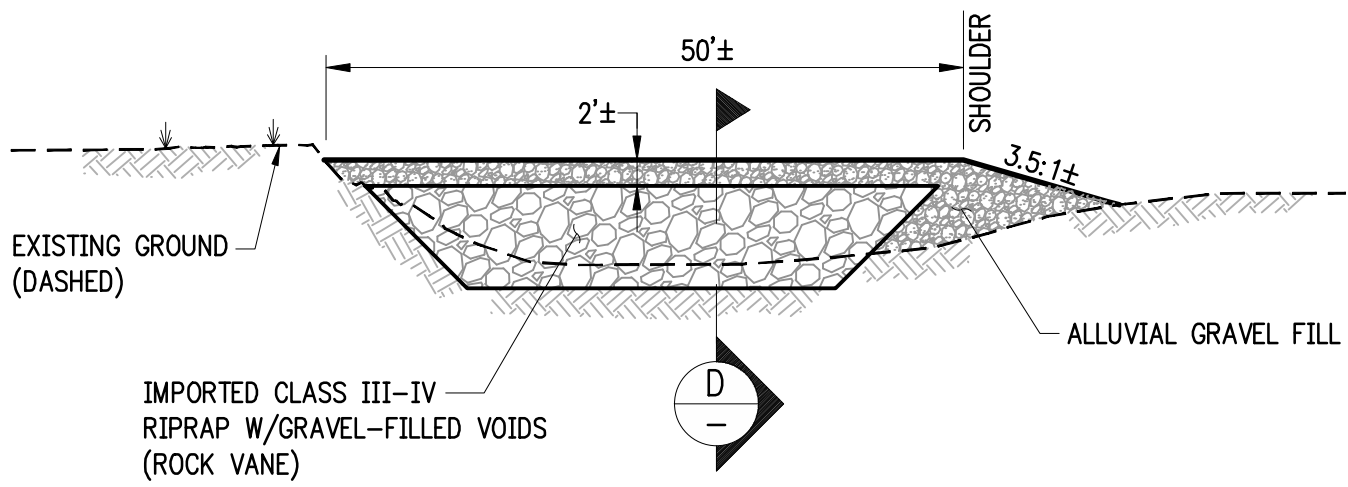
AUTOCAD DWG. DO NOT REVISE MANUALLY.

FILE DATE:

PLOT SCALE:

FILENAME:

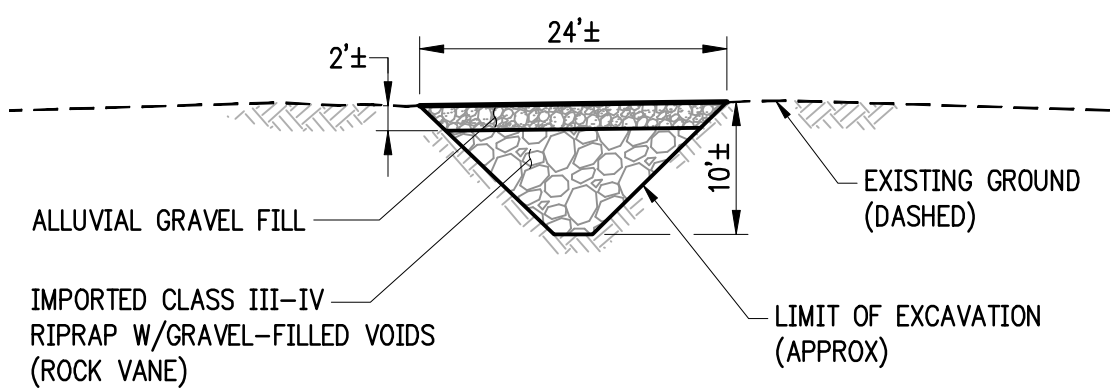
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TYPICAL SECTION

SCALE: 1" = 15'

C
3



TYPICAL SECTION

SCALE: 1" = 15'

D
-

FILE DATE:
PLOT SCALE:
FILENAME:

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2022 RIVERS AND FLOODPLAINS IMPROVEMENTS
LOWER SAG RIVER – MP 20 BANK EROSION MITIGATION
SECTIONS

TRANS ALASKA PIPELINE SYSTEM

DATE: 07/12/22

PLATE 5

REV.	D	DWN. MTH	CKD. AJN	APPR. JPD
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SCALE: AS NOTED	SHEET 5 OF 5
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From: [Nagel, Peter C.](#)
To: [Spco Records](#)
Cc: [West, Jeri](#)
Subject: TAPS, Bank Erosion Mitigation at PLMP 20
Date: Wednesday, July 13, 2022 9:51:55 AM
Attachments: [49999.pdf](#)

CAUTION: This email originated from outside the State of Alaska mail system. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hi All, and thank you for hosting the meeting on the subject yesterday. Attached please find Alyeska's letter application to amend the lease boundaries as discussed. No paper copy will be sent.
Pete 787-8170

Protected Document. Refer to Alyeska Data Access and Classification Policy, LEGAL-DPOL-001.